NOTES

SCIRPUS AMERICANUS PERSOON (CYPERACEAE) IN COSTA RICA.—According to Standley, Flora of Costa Rica, Field Mus. Bot. Ser. 16: 104-105, 1937, the genus *Scirpus* is not at all well represented in Costa Rica, having only one species, *S. inundatus* (R. Br.) Poir., a small plant of high meadows and bogs on the volcanoes.

Hence I was surprised to see what appeared to be *S. americanus* on a kodachrome slide shown me by Stephen J. Gawarecki, of the U. S. Geological Survey. The plant formed a dense belt of bright green around a hot spring. He furnished exact directions as to the locality, so I wrote to Dr. William H. Hatheway, of the Tropical Science Center, San Jose, Costa Rica, and asked him to try to locate the stand and collect specimens for me. He had no difficulty in finding it and sent an excellent series of specimens, though the heads are a bit young and bear few full-sized achenes. The plant forms dense stands around iron-rich hot springs in a pasture near Bermejo, about 4 km. south of Cartago, elevation about 1400 m., April 11, 1965, *Hatheway 1314* (US, NY, SMU, F). The culms are said to be used to stuff mattresses.

The plant resembles in habit *Scirpus olneyi* Gray more than it does most material of *S. americanus* Persoon, especially in the very short stiffly erect bract subtending the capitate inflorescence. Moreover, the size and dimensions of the achene, 2 mm. x 1.5 mm., ar those of *S. olneyi*. They seemed completely filled out, though immature; possibly they would have enlarged some. However, these specimens have reduced second and third involucral bracts, a character never found in *S. olneyi* according to Koyama in the most recent treatment of *Scirpus* sect. *Pterolepis*, to which these plants belong (Canad. Jour. Bot. 41: 1107-1131, 1963). They also have the scales of the spikelet bifid, with mucro equalling or shorter than the lobes of the scales, a character of *S. americanus*. The heads are dark purplish brown. In Koyama's key (op. cit. p. 1111), once it is admitted that the specimens belong to *S. americanus*, they run readily to *S. americanus* var. *monophyllus* (Presl) Koyama, which ranges from British Columbia southward along the Pacific Coast to Chile, thence eastward to Uruguay and westward to New Zealand and Australia. Though Central America is within the range of this variety, Koyama cities no specimens from between Baja California and Lima, Peru. Dr. Tetsuo Koyama, on a recent visit to Washington, kindly examined this material and confirmed that they are, indeed, *S. americanus* var. *monophyllus*.

The ambiguity of the characters of these specimens, as well as of several others determined by Koyama as *S. americanus*, leads one to wonder if *S. olneyi* is really a good species, after all. The possession of

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the second and third bracts is a positive character, and constant, more tangible than habit, but the fact that *S. olneyi* is cited by Koyama from Honduras and Guatemala may also be significant. This is no place to make a formal reduction, but I do not hesitate to recommend that collectors in Central America search for plants of this relationship and accumulate enough material to demonstrate whether one or two populations are represented, and whether the Hatheway specimens may not represent an intermediate population, effectively breaking down the distinction between *S. americanus* and *S. olneyi*.—*F. R. Fosberg, Pacific Vegetation Project, National Research Council, Washington, D. C.*

ASTRANTHIUM INTEGRIFOLIUM VAR. TRIFLORUM (RAFINESQUE) SHINNERS, COMB. NOV. (COMPOSITAE).—Based on *Bellis ciliata* var. *triflora* Rafinesque, New Fl. N.A. 2: 25. 1837 ("1836"). This is the oldest name in the rank of variety for the common Texas race. *A. integrifolium* var. *ciliatum* (Rafinesque) Larsen, Ann. Mo. Bot. Garden 20: 35, 1933, and *A. integrifolium* var. *rosulatum* Larsen, ibid. 36, are the same. In the excellent new monograph of the genus by D. C. D. DeJong ("A Systematic Study of the Genus Astranthium (Compositae, Astereae)," Publ. Museum Michigan State Univ. Biol Ser. vol. 2 no. 9: 429-528, 1965) it appears as *A. integrifolium* subsp. *ciliatum* (Rafinesque) DeJong (p. 504).—*Lloyd H. Shinners.*

THELESPERMA FILIFOLIUM VAR. INTERMEDIUM (RYDBERG) SHINNERS, COMB. NOV. (COMPOSITAE).—Based on *T. intermedium* Rydberg, Bull. Torr. Bot. Club 27: 631-632. 1900. This is a well-defined western and more inland race of the species. As Dr. B. L. Turner has already pointed out (Rhodora 61: 243-246, 1959), the name *T. filifolium* (Hooker) Gray was mistakenly applied in my account of the Texas species (Field. & Lab. 18: 17-24, 1950) to the coastal endemic later described as *T. nuecense* Turner. The plant I called *T. intermedium* has remained without a name in varietal rank.—*Lloyd H. Shinners.*